

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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Applicant : Kia Silverbrook

Application No.:

Filed : April 10, 2001

Title : IMPROVEMENTS RELATING TO INKJET PRINTERS

Docket No. : 360040

Group/Div. :

Examiner :

## PRELIMINARY AMENDMENT

Commissioner for Patents  
Washington, D.C. 20231

2029 Century Park East, Suite 3800  
Los Angeles, CA 90067-3024  
April 10, 2001

Commissioner:

## IN THE CLAIMS

Please delete claims 1 to 129 and insert new claims 130 to 137

130. (New) An inkjet printhead having a series of nozzles for the ejection of ink wherein each said nozzle has a rim formed by the deposition of a rim material layer over a sacrificial layer and a subsequent planar removal of at least said rim material layer so as to form said nozzle rim.

1 131. (New) An inkjet printhead as claimed in claim 130 wherein said planar removal comprises  
2 chemical - mechanical planarization of said rim material layer.

1 132. (New) An inkjet printhead as claimed in claim 131 wherein parts of said sacrificial layer are  
2 also removed by said planar removal.

1 133. (New) An inkjet printhead as claimed in claim 130 wherein said planar removal process is  
2 an etching process.

1 134. (New) An inkjet printhead as claimed in claim 130 wherein said rim material layer  
2 comprises TEOS glass.

1 135. (New) An inkjet printhead as claimed in claim 130 wherein said rim material layer is  
2 PECVD Si<sub>3</sub>N<sub>4</sub>.

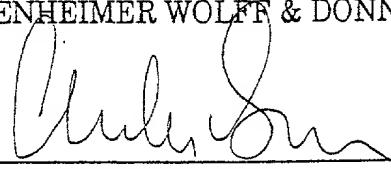
1 136. (New) An inkjet printhead as claimed in claim 130 wherein said rim material layer is  
2 MOCVD TiN.

1 137. (New) An inkjet printhead as claimed in claim 130 wherein said rim material layer is  
2 ECR CVD TiN.

Respectfully submitted,

OPPENHEIMER WOLFF & DONNELLY, LLP.

By

  
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**PATENT**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant:	Kia Silverbrook	Examiner:	Not yet assigned
Serial No.	Not yet assigned	Group Art Unit:	Not yet assigned
Filed:	Herewith	Docket No.	360040-21
Title:	POWER DISTRIBUTION FOR INKJET PRINTHEADS		

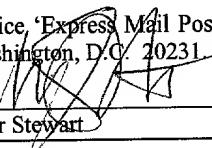
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**CERTIFICATE UNDER 37 CFR 1.10**

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By:   
Name: Amber Stewart

**PRELIMINARY AMENDMENT**

Commissioner for Patents  
Washington, D.C. 20231

Sir:

**IN THE CLAIMS**

Please cancel original claim 1 and add new claims 175-191 as follows:

175. (New) A power distribution arrangement for an elongate inkjet printhead of a kind having a plurality of longitudinally spaced voltage supply points, said power distribution arrangement including:

two or more elongate low resistance power supply busbars; and

interconnect means to connect a selected plurality of said voltage supply points to said busbars.

176. (New) A power distribution arrangement according to claim 175 wherein said busbars are disposed to extend parallel to said printhead and said interconnect means provide interconnections extending generally transversely therebetween.

177. (New) A power distribution arrangement according to claim 175 wherein said interconnect means is in the form of a tape automated bonded film (TAB film).

178. (New) A power distribution arrangement according to claim 177 wherein said TAB film electrically connects with said busbars by means of correspondingly sized noble metal deposited strips formed on said TAB film.

179. (New) A power distribution arrangement according to claim 175 wherein said interconnect means also includes a plurality of control lines for connection to selected other of said voltage supply points on said printhead.

180. (New) A power distribution arrangement according to claim 175 wherein said flexible interconnect means is in the form of one or more printed circuit boards which connect directly to said busbars, with wire bonds connecting the printed circuit boards to said printhead.

181. (New) A power distribution arrangement according to claim 175 wherein said interconnect means is configured so that it need only be connected to said printhead along one edge thereof.

182. (New) A power distribution arrangement according to claim 177 wherein a double sided TAB film is used having power interconnect means on the one side for connection between said busbars and printhead, and control line interconnect means on the other of said sides for connection of the printhead to corresponding external control lines.

183. (New) A power distribution arrangement according to claim 179 or claim 182 wherein said control line interconnect means are also repeatedly connected with said power supply busbars.

184. (New) A power distribution arrangement according to claim 179 wherein the printhead is in the form of a printhead chip manufactured by a MEMS processing technique.

185. (New) A power distribution arrangement according to claim 175 wherein said printhead utilises a thermal bend actuator device for ejection of ink from a plurality of corresponding nozzles formed in the printhead.

186. (New) A power distribution arrangement according to claim 179 wherein said low resistance busbars and flexible interconnect means are packaged with an associated ink supply unit for delivering ink to ink supply passages formed in said printhead.

187. (New) A power distribution arrangement wherein said ink supply unit includes:

a slot for insertion of said printhead;

a series of elongated chambers for the storage of separate color inks, said chambers being interconnected with said slot for the supply of ink to said printhead;

said busbars being connected along said ink supply unit; and

the interconnect means being in the form of a tape automated bonding strip similarly disposed along the outside of said ink supply unit having a series of control lines along one surface thereof for mating with corresponding external series of control lines, said tape automated bonding strip further having a repeating series of interconnects to said printhead, said interconnects interconnecting said control lines and said busbars to said printhead.

188. (New) A power distribution arrangement according to claim 179 or claim 187 wherein said ink supply unit is detachable from said power supply and said external series of control lines.

189. (New) A power distribution arrangement according to claim 175 wherein said busbars comprise two mechanically stiff conductive rails.

190. (New) A power distribution arrangement according to claim 175 wherein said interconnect means includes a flexible portion that connects with said printhead.

191. (New) A power distribution arrangement according to claim 187 wherein said ink supply unit includes a series of positioning protuberances for accurately locating the power supply busbars and/or interconnect means therewith

REMARKS

Kindly examine the application based on the above claims.

Respectfully submitted,



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